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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/351,420	07/09/1999	BRIAN VON HERZEN PH.D	57-JWLRY	9695

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LOUIS J. HOFFMAN, P.C.  
11811 North Tatum Boulevard, Suite 2100  
Phoenix, AZ 85028

EXAMINER
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NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2629

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07/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/351,420	<b>Applicant(s)</b> VON HERZEN PH.D ET AL.	
	<b>Examiner</b> Kimnhung Nguyen	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-51 and 53-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-29 is/are allowed.
- 6) ☒ Claim(s) 1, 5-9, 11, 12, 14, 16, 17, 20, 22, 24, 25, 30, 34-36, 38, 49-51 and 53-55 is/are rejected.
- 7) ☐ Claim(s) 2-4, 10, 13, 15, 18, 19, 21, 23, 31-33, 37, 39-48 and 56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Application has been examined. The claims 1-51, and 53-56 are pending. The examination results are as following.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-9, 11, 16, 17, 20, 22, 25, 49, 53 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barlow (US 4,637,148) in view of Orsano (US 5,544,027).

Regarding claim 1, 16, 25, 49, Barlow discloses in figures 1-3, an illuminated wearable article comprising a regular two-dimensional (because Barlow discloses the case 12 having two-dimensional see case 12, see fig. 1); a graphic controller physically fastened coupled electrically connected to the case (see figs 3-4); a power source (32) physically fastened and electrically coupled to the graphics controller; and an fastener physically fastened (18) coupled to the back side and structure to allow attachment to a human clothing (see col. 6, lines 61-63).

However, Barlow does not disclose an array of pixel display element having a front light-emitting side and an opposing back side.

Orsano discloses in figs. 1-3, a LED display for protective helmet having an array of pixel display element (LED 2) and may have having a front light-emitting side and an opposing back side (see fig. 5B, see col. 2, lines 46-46 and col. 3, lines 40-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an array of pixel display element as taught by Orsano into the illuminated wearable article of Barlow for producing the claimed invention because this would provide the field of LED signage (such as displays used in advertising) to control the lighting of LEDs to form word, design stream of words, or LEDs also used in incorporated into the subject helmets and displays (see Orsano, col. 3, lines 1-4).

Regarding claim 5, Barlow does not disclose a common substrate (because case 12 should have a substrate).

However, Barlow does not disclose the elements (a)-(d)are mounted.

Orsano discloses in figs. 1-3, the elements (LEDs 2) display are mounted on a substrate (flexible plastic 6, see fig. 2A, col. 3, lines 28-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the elements (LEDs 2) display are mounted on a substrate as taught by Orsano into the illuminated wearable article of Barlow because this would provide the LEDs can be lit simultaneously or sequentially, the sequence being regulated by a computer chip, the timing and rate of sequence can be varied , thus making the helmet consistently interesting to the wearer and children in particular (see Orsano, see abstract).

Regarding claim 6, Barlow discloses further the substrate is a printed circuit board (see fig. 1).

Regarding claims 7-9, Barlow discloses further the fastener has two position, open and closed (see on and off of switch 20, see col. 1, lines 61-67), and obvious is a safe pin, and the fasten is configured so that the user cannot remove it from the substrate in either of the two positions (see col. 10, lines 47-49).

Regarding claim 11, Barlow discloses further the graphics controller is control circuit (Flasher circuit 34, see fig. 3).

However, Barlow does not disclose a computer program to display a user-selected sequence of patterns on the array.

Orsano discloses a control circuit (timing of LED 2) is arranged to configure to select the sequence of patterns on the array (see col. 2, lines 51-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the control circuit (timing of LED 2) is arranged to configure to select the sequence of patterns on the array as taught by Orsano into the illuminated wearable article of Barlow because this would provide the color, LED patterns and ornamentation selected should be those likely to appeal to the wearer, thus incorporating the images of youth idols, cartoon characters and the like to augment the LED display is encouraged (see Orsano, see col. 2, lines 51-58).

Regarding claims 16, Barlow discloses a graphic controller physically fastened coupled electrically connected to the case as discussed in claim 1. However, Barlow does not disclose a connector physically coupled to the array.

Orsano discloses a connector physically (generator 3B) coupled to the array (LED2) see col. 3, lines 1-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the connector physically coupled to the array as taught by Orsano into the illuminated wearable article of Barlow because this would provide the electrical connection between LEDs 2 and generator 3B is typically made of a resilient expandable wire and if the wearer is knocked from the bicycle, the cord would readily detach to minimize any chance of injury (see Orsano col. 3, lines 9-18).

Regarding claim 17, Barlow does not disclose the programming connector comprises a light responsive transducer.

Orsano discloses in figs. 1-3, the connector comprises a light responsive transducer (because Orsano discloses the timing Of LED 2 lighting may be controlled and the lights may be sequentially lit, see col. 2, lines 59-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the connector the connector comprises a light responsive transducer as taught by Orsano into the illuminated wearable article of Barlow because this would provide provide the lights may be sequentially lit from front to back or from side to side, from back to front, or any other conceivable lighting parttern (see col. 2, lines 59-63).

As to claim 20, Barlow does not disclose that the pixel display elements are light-emitting diodes. Orsano discloses the array pixel display elements (LEDs 2) are light-emitting diodes (because Orsano discloses the LEDs 2 are lighting controller, see col. 2, lines 59-65) as discussed above.

As to claim 22 is rejected the same as claim 1.

As to claims 53, Barlow does not disclose wherein the array is composed of emission pixel display elements. Orsano discloses the array pixel display elements (LEDs 2, see col. 2, lines 59-65) as discussed above.

As to claim 55, Barlow discloses the graphics controller as discussed in claim 1. However, Barlow does not disclose the pixel array are structured to permit animated displays.

Orsano discloses the pixel array are structured to permit animated displays, see col. 2, lines 51-58) as discussed above.

4. Claims 30 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barlow (US 4,637,148) and Orsano (US 5,544,027) and in view of Hawkins (US 6,143,381).

Regarding claim 30, Barlow discloses in figures 1-3, an illuminated wearable article comprising a regular two-dimensional (see case 12, see fig. 1); a graphic controller physically fastened coupled electrically connected to the case (see figs 3-4); a power source (32) physically fastened and electrically coupled to the graphics controller. However, Barlow does not disclose an array of pixel display element, a graphics controller electrically connected to the array, and a fastener physically coupled to the top of the case, whereby the case is suspended from the fastener and the pixel array are structured to permit animated display.

Orsano discloses in figs. 1-3, a LED display for protective helmet having an array of pixel display element (LED 2, see fig. 5B, see col. 2, lines 46-46 and col. 3, lines 40-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an array of pixel display element as taught by Orsano into the illuminated wearable article of Barlow for producing the claimed invention because this would

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provide the field of LED signage (such as displays used in advertising) to control the lighting of LEDs to form word, design stream of words, or LEDs also used in incorporated into the subject helmets and displays (see Orsano, col. 3, lines 1-4).

Barlow and Orsano do not disclose a fastener physically coupled to the top of the case, whereby the case is suspended from the fastener.

Hawkins discloses in fig. 1-3, a backlight apparatus for a light transmissive ornament having a fastener physically (22) coupled to the top of the case, whereby the case is suspended from the fastener (see col. 5, lines 23-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the a fastener physically (22) coupled to the top of the case, whereby the case is suspended from the fastener as taught by Hawkins to the system having a regular two-dimensional of Barlow and Orsano because this would provide the construction of equipment with a hanger means to attach the unit to a tree or the object that the user wishes to adorn (see Hawkins, see col. 3, lines 23-24).

As to claim 34, Barlow and Orsano do not disclose further the fastener is a flexible loop.

Hawkins discloses in fig. 1-3, a backlight apparatus for a light transmissive ornament having a fastener physically (suspension means 22) coupled to the top of the case, whereby the case is suspended from the fastener and may be a flexible loop (because Hawkins discloses suspension means 22 may include other types of simple mechanical structure including, but not limited to Velcro, suction cups or snaps see col. 5, lines 23-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the fastener is a flexible loop as taught by Hawkins into the illuminated



wearable article of Barlow and Orsano because this would provide the construction of equipment with a hanger means to attach the unit to a tree or the object that the user wishes to adorn (see Hawkins, see col. 3, lines 23-24).

As to claim 35, Barlow discloses further the graphics controller is control circuit (Flasher circuit 34, see fig. 3).

However, Barlow and Hawkins do not disclose a computer program to display a user-selected sequence of patterns on the array.

Orsano discloses a control circuit (timing of LED 2) is arranged to configure to select the sequence of patterns on the array (see col. 2, lines 51-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the control circuit (timing of LED 2) is arranged to configure to select the sequence of patterns on the array as taught by Orsano into the illuminated wearable article of Barlow and Hawkins because this would provide the color, LED patterns and ornamentation selected should be those likely to appeal to the wearer, thus incorporating the images of youth idols, cartoon characters and the like to augment the LED display is encouraged (see Orsano, see col. 2, lines 51-58).

5. Claims 12, 24 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barlow (US 4,637,148) in view of Orsano (US 5,544,027) and in view of Janney (US 6,201,525).

Regarding claim 12, Barlow does not disclose wherein the control circuit is programmed to permit the user to select the sequence of patterns from among: members of an alphanumeric character set, graphical display element and animation frames.

Orsano discloses the control circuit (controller LEDs 2) to select the sequence of patterns (see col. 2, lines 52-54) from among animation frame (cartoon characters, see col. 2, lines 51-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement selecting the sequence of patterns from among animation frame as taught by Orsano into the illuminated wearable article of Barlow because this would the color, LED patterns and ornamentation selected should be those likely to appeal to the wearer, thus incorporating the images of youth idols, cartoon characters and the like to augment the LED display is encouraged (see Orsano, see col. 2, lines 51-58).

Barlow and Orsano do not disclose the control circuit is programmed to permit the user to select the sequence of pattern from among members of an alphanumeric character set and graphical display element.

Janney discloses in fig. 5, a control circuit is a programmable to permit the user to select the sequence of pattern from among members of an alphanumeric character set and graphical display element (see col. 1, lines 57-57 and col. 2, lines 57-66).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the a programmable to permit the user to select the sequence of pattern from among members of an alphanumeric character set and graphical display element as taught by Janney into the control circuit of Barlow and Orsano for producing the claimed invention because this would provide character information to the display unit driver (see col. 3, lines 60-62).

As to claim 24, Barlow and Orsano does not disclose further comprising means for storing for selection an alphanumeric character set and means for selecting the message as a sequence of patterns from among a set of characters.

Janney discloses in fig. 5, a control circuit is a programmable to permit the user to select the sequence of pattern from among members of an alphanumeric character set and graphical display element (see col. 1, lines 57-57 and col. 2, lines 57-66).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the a programmable to permit the user to select the sequence of pattern from among members of an alphanumeric character set and graphical display element as taught by Janney into the control circuit of Barlow and Orsano for producing the claimed invention because this would provide character information to the display unit driver (see col. 3, lines 60-62).

Regarding claim 54, Barlow and Orsano do not disclose the graphics controller is structured to allow driving the display elements to scroll a message across the display window.

Janney discloses of pixel display elements to scroll a message across the array (see column 2, lines 57-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the display elements to scroll a message across the display as taught by Janney et al. to the system of Barlow and Orsano because this would provide the character information to the display unit driver and allow to the user to program many message up to 96

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characters long, and scrolling characters at a time across the display (see Janney, see col. 2, lines 57-62).

6. Claims 36, 38 and 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barlow (US patent 4,637,148) and Orsano (US 5,544,027) in view of Janney (US 6,201,525) and further in view of Ryan, Jr. et al. (US patent 6,028,597).

Regarding claim 36 is rejected the same as claim 12.

Barlow and Alber, Hawkins and Janney disclose an illuminated wearable article comprising a regular two-dimensional array of pixel display elements as discussed above. However, they do not disclose the brightness of each pixel is controlled by pulse-width modulation; and the article having a volume of less than 20 mililiters and the case is shaped like a rectangular prism.

Regarding the claims 50-51, it would have been obvious to the system of Barlow to have the article having a volume of less than 20 milliliters and the case is shaped like a rectangular prism as claimed since such a modification would have involved a mere change in the range or shape of the system. A change in range or shape is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ 237 (CCPA 1995) and

In re Reven, 156 USPQ 679 (CCPA 1968).

Regarding claim 38, Ryan discloses a brightness of each pixel display element and pulse width modulated (see abstract)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the brightness of each pixel display element and pulse width modulated as taught by Ryan into the illuminated wearable of Barlow and Orsano for producing the claimed invention because this would provide the visible light emitters of that array have a selected perceivable bright (see Ryan, Jr. et al., see abstract).

*Allowable Subject Matter*

7. Claims 26-29 are allowed.
8. Claims 2-4, 10, 13,15,18-19, 21, 23, 31-33, 37, 39-48 and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The present invention comprises a method of programming a message being scrolled on the display comprising a sequence of pattern or characters into a wearable ornamental comprising a activating by the buttons. The closest prior art, Barlow (US 4,637,148), Albert et al. (US 6,118,426) and Janney (6,201,525) shows a similar system which also disclose a moving alphanumeric messages are programmed by manipulation of five buttons related to the wearable ornamental display. However, they fails to teach the substrate further has mounted thereon exactly two buttons electrically coupled to the graphics controller as claims 10; or the power source is removable and replaceable, and further comprising a programming connector physically coupleable to the array and electrically connectable to the graphics controller only when the power source is remove, whereby the circuit can be programmed without over-driving

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the power source as claims 18-19 and 21; or the steps of activating a third button combination comprised of clicking at least one of the buttons, while in the edit mode to toggle from the edit mode to the run mode, thereby causing the replacement of the first character by the first replacement character in the scrolled message being display as claim 26; or further comprising a second regular two-dimensional array of pixel display elements supported by the case and having a light-emitting side directed away from the case and in a different direction from the first array as claims 37, 39-48; or wherein the array has a width in pixels that is between one and five times 1.1 and 2.0, 1.5 the character pitch of a character set displayed on the array by the graphics controller as claims 2-4, 23 and 31-33; or the two-dimensional array comprises an array of 7 pixels by 5 pixels as claim 56.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kimnhung Nguyen

Patent Examiner

July 22, 2007